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I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the U.S. Patent and Trademark Office, P.O. Box 2327, Arlington, VA 22202.

Docket No.: L&L-10206

  
MICHAEL BURNS

Date: January 16, 2002

U.S. Patent and Trademark Office  
P.O. Box 2327  
Arlington, VA 22202

Sir:

Enclosed herewith are the necessary papers for filing the following application for Letters Patent:

Applicant : MARKUS DOETSCH ET AL.  
Title : METHOD AND DEVICE FOR SYNCHRONIZING MOBILE RADIO RECEIVERS IN A MOBILE RADIO SYSTEM

1 sheet of formal drawings.

The payment in the amount of \$ 740.00 covering the filing fee.

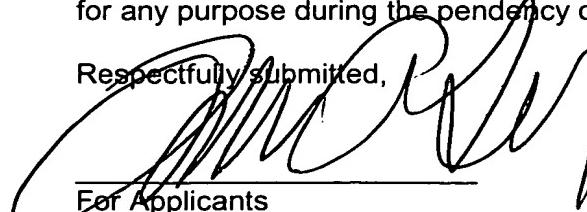
Information Disclosure Statement and 3 References.

PCT Cover Sheet WO 01/06671 A1.

This application is being filed without a signed oath or declaration under the provisions of 37 CFR 1.53(f). Applicants await notification of the date by which the oath or declaration and the surcharge are due, pursuant to this rule.

The Patent and Trademark Office is hereby given authority to charge Deposit Account No. 12-1099 of Lerner and Greenberg, P.A. for any fees due or deficiencies of payments made for any purpose during the pendency of the above-identified application.

Respectfully submitted,

  
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(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES  
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

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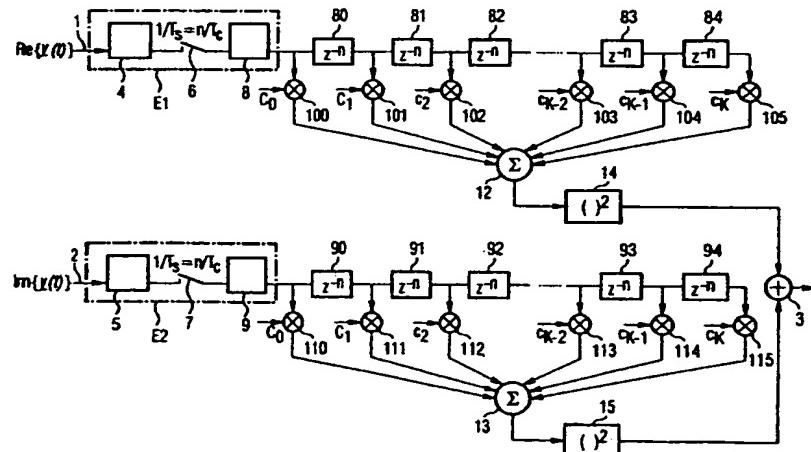
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| (51) Internationale Patentklassifikation <sup>7</sup> : | H04B 1/707.                                | (71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): INFINEON TECHNOLOGIES AG [DE/DE]; St-Martin-Strasse 53, D-81541 München (DE).  |
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| (21) Internationales Aktenzeichen:                      | PCT/DE00/02272                             |   |
| (22) Internationales Anmeldedatum:                      | 12. Juli 2000 (12.07.2000)                 | (72) Erfinder; und  |
| (25) Einreichungssprache:                               | Deutsch                                    | (75) Erfinder/Anmelder (nur für US): DOETSCH, Markus [DE/DE]; Raintaler-Strasse 36, D-81539 München (DE). JUNG, Peter [DE/DE]; Im Rabental 28, D-67697 Otterberg (DE). PLECHINGER, Jörg [DE/DE]; Westermühlstrasse 16, D-80469 München (DE). SCHMIDT, Peter [DE/DE]; Bahnhofstrasse 32, D-67167 Eppelheim (DE). SCHNEIDER, Michael [DE/DE]; St-Martin-Strasse 44A, D-81541 München (DE). KELLA, |
| (26) Veröffentlichungssprache:                          | Deutsch                                    |   |
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[Fortsetzung auf der nächsten Seite]

(54) Title: METHOD AND DEVICE FOR SYNCHRONISING MOBILE TELEPHONE RECEIVERS IN A MOBILE TELEPHONE SYSTEM

(54) Bezeichnung: VERFAHREN UND VORRICHTUNG ZUR SYNCHRONISATION VON MOBILFUNKEMPFÄNGERN IN EINEM MOBILFUNKSYSTEM



(57) Abstract: The invention concerns a method for synchronising mobile telephone receivers in a mobile telephone system, which consists in using a first synchronising channel having a first frequency and via which a known code for all the mobile telephone receivers and for all the base stations of the mobile telephone system is transmitted by means of a signal. The signal is delayed for a unknown time by the transmission from one base station to a mobile telephone receiver, and the first frequency is shifted to a second frequency by the transmission. The method is characterised in that it comprises the following steps: (a) correlating and sampling the received signal; (b) digitally filtering the signal correlated and sampled at step (a); (c) squaring the signal filtered at step (b); (d) determining the highest level of the signal squared at step (c); (e) estimating the unknown duration with the highest signal level determined at step (d); (f) detecting the received signal with the known code; and (g) fine-tuning the second frequency on the first frequency.

(57) Zusammenfassung: Ein Verfahren zur Synchronisation von Mobilfunkempfängern in einem Mobilfunksystem, wobei ein erster Synchronisationskanal, der eine erste Frequenz aufweist und über den ein für alle Mobilfunkempfänger und für alle Basisstationen des Mobilfunksystems bekannter Code mittels

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